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<110> MIRAS, STEPHANE
SALVI, DANIEL
ROLLAND, NORBERT
JOYARD, JACQUES
FERRO, MYRIAM
GARIN, JEROME
GRUNWALD, DIDIER

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<140> 10/517,309

<141> 2003-12-17

<150> PCT/FR03/01877

<151> 2003-06-19

<150> FR02/07729

<151> 2002-06-21

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Asp Trp Lys Ile Gln Lys Gly Met Ile Arg Pro Phe Leu Pro Arg Lys
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Phe Pro Cys Ile Pro Ala Thr Asp Val Ala Gly Glu Val Val Glu Val
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Gly Ser Gly Val Lys Asn Phe Lys Ala Gly Asp Lys Val Val Ala Val
85 90 95

Leu Ser His Leu Gly Gly Gly Gly Leu Ala Glu Phe Ala Val Ala Thr
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Glu Lys Leu Thr Val Lys Arg Pro Gln Glu Val Gly Ala Ala Glu Ala
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Ala Ala Leu Pro Val Ala Gly Leu Thr Ala Leu Gln Ala Leu Thr Asn
130 135 140

Pro Ala Gly Leu Lys Leu Asp Gly Thr Gly Lys Lys Ala Asn Ile Leu
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Val Thr Ala Ala Ser Gly Gly Val Gly His Tyr Ala Val Gln Leu Ala
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Lys Leu Ala Asn Ala His Val Thr Ala Thr Cys Gly Ala Arg Asn Ile
 180 185 190

Glu Phe Val Lys Ser Leu Gly Ala Asp Glu Val Leu Asp Tyr Lys Thr
 195 200 205

Pro Glu Gly Ala Ala Leu Lys Ser Pro Ser Gly Lys Lys Tyr Asp Ala
 210 215 220

Val Val His Cys Ala Asn Gly Ile Pro Phe Ser Val Phe Glu Pro Asn
 225 230 235 240

Leu Ser Glu Asn Gly Lys Val Ile Asp Ile Thr Pro Gly Pro Asn Ala
 245 250 255

Met Trp Thr Tyr Ala Val Lys Lys Ile Thr Met Ser Lys Lys Gln Leu
 260 265 270

Val Pro Leu Leu Leu Ile Pro Lys Ala Glu Asn Leu Glu Phe Met Val
 275 280 285

Asn Leu Val Lys Glu Gly Lys Val Lys Thr Val Ile Asp Ser Lys His
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Ser Asp Glu Leu Leu Leu Lys Ile Glu Ala Ala Thr Leu Asn Pro Ile
35 40 45

Asp Trp Lys Ile Gln Lys Gly Val Leu Arg Pro Leu Leu Pro Arg Lys
50 55 60

Phe Pro Thr Ile Pro Gly Thr Asp Val Ala Gly Glu Val Val Gln Ala
65 70 75 80

Gly Ser Ala Val Asn Arg Phe Lys Thr Gly Asp Lys Val Val Ala Val
85 90 95

Leu Ser His Ala Thr Gly Gly Ala Leu Ala Glu Tyr Ala Val Ala Lys
100 105 110

Glu Asn Leu Thr Val Ala Arg Pro Pro Glu Val Ser Ala Ala Glu Gly
115 120 125

Ala Ala Leu Pro Val Ala Ala Leu Thr Ala His Gln Ala Leu Thr Gln
130 135 140

Phe Ala Asn Ile Lys Leu Asp Gly Ser Gly Glu Arg Lys Asn Ile Leu
145 150 155 160

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Ile Thr Ala Ala Ser Gly Gly Val Gly His Tyr Ala Val Gln Leu Ala
165 170 175

Lys Leu Gly Asn Thr His Val Thr Ala Thr Cys Gly Ala Arg Asn Leu
180 185 190

Asp Phe Val Lys Gly Leu Gly Ala Asp Glu Val Leu Asp Tyr Lys Thr
195 200 205

Pro Glu Gly Ala Ser Leu Thr Ser Pro Ser Gly Lys Lys Tyr Asp Tyr
210 215 220

Val Val His Gly Ala Ser Gly Ile Pro Trp Ser Thr Phe Glu Pro Asn
225 230 235 240

Leu Ser Glu Ala Gly Lys Val Ile Asp Leu Thr Pro Gly Pro Thr Ala
245 250 255

Met Met Thr Phe Ala Trp Lys Lys Leu Thr Phe Ser Lys Lys Gln Leu
260 265 270

Val Pro Leu Leu Leu Ile Pro Lys Ile Pro Asn Phe Glu Tyr Val Val
275 280 285

Asn Leu Val Lys Glu Lys Lys Leu Lys Thr Val Ile Asp Ser Lys His
290 295 300

Pro Leu Ser Lys Gly Glu Asp Ala Trp Ser Arg Ile Met Gly Gly His
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Ala Thr Gly Lys Ile Ile Ile Glu Pro
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Lys Ala Gly Asp Lys Val Val Ala Val Leu Ser His Leu
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 1 5 10 15

Val Leu Arg Pro Leu Leu Pro Arg Lys Phe Pro Thr Ile Pro Gly Thr
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Asp Val Ala Gly Glu Val Val Gln Ala Gly Ser Ala Val Asn Arg Phe
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Lys Thr Gly Asp Lys Val Val Ala Val Leu Ser His Ala
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Gln Ala Val Glu Phe Thr Pro Ala Asp Pro Ala Glu Asn Glu Ile Gln
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Val Glu Asn Lys Ala Ile Gly Ile Asn Phe Ile Asp Thr Tyr Ile Arg
 35 40 45

Ser Gly Leu Tyr Pro Pro Pro Ser Leu Pro Ser Gly Leu Gly Thr Glu
 50 55 60

Ala Ala Gly Ile Val Ser Lys Val Gly Ser Gly Val Lys His Ile Lys
 65 70 75 80

Ala Gly Asp Arg Val Val Tyr Ala Gln Ser Ala Leu Gly Ala Tyr Ser
 85 90 95

Ser Val His Asn Ile Ile Ala Asp Lys Ala Ala Ile Leu Pro Ala Ala
 100 105 110

Ile Ser Phe Glu Gln Ala Ala Ala Ser Phe Leu Lys Gly Leu Thr Val
 115 120 125

Tyr Tyr Leu Leu Arg Lys Thr Tyr Glu Ile Lys Pro Asp Glu Gln Phe
 130 135 140

Leu Phe His Ala Ala Ala Gly Gly Val Gly Leu Ile Ala Cys Gln Trp
 145 150 155 160

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Ala Lys Ala Leu Gly Ala Lys Leu Ile Gly Thr Val Gly Thr Ala Gln
 165 170 175

Lys Ala Gln Ser Ala Leu Lys Ala Gly Ala Trp Gln Val Ile Asn Tyr
 180 185 190

Arg Glu Glu Asp Leu Val Glu Arg Leu Lys Glu Ile Thr Gly Gly Lys
 195 200 205

Lys Val Arg Val Val Tyr Asp Ser Val Gly Arg Asp Thr Trp Glu Arg
 210 215 220

Ser Leu Asp Cys Leu Gln Arg Arg Gly Leu Met Val Ser Phe Gly Asn
 225 230 235 240

Ser Ser Gly Ala Val Thr Gly Val Asn Leu Gly Ile Leu Asn Gln Lys
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Gly Ser Leu Tyr Val Thr Arg Pro Ser Leu Gln Gly Tyr Ile Thr Thr
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Arg Glu Glu Leu Thr Glu Ala Ser Asn Glu Leu Phe Ser Leu Ile Ala
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 35 40 45

Tyr Ile Glu Ser Tyr Phe Arg Lys Gly Ile Tyr Pro Cys Glu Lys Pro
 50 55 60

Tyr Val Leu Gly Arg Glu Ala Ser Gly Thr Val Val Ala Lys Gly Lys
 65 70 75 80

Gly Val Thr Asn Phe Glu Val Gly Asp Gln Val Ala Tyr Ile Ser Asn
 85 90 95

Ser Thr Phe Ala Gln Tyr Ser Lys Ile Ser Ser Gln Gly Pro Val Met
 100 105 110

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Lys Leu Pro Lys Gly Thr Ser Asp Glu Glu Leu Lys Leu Tyr Ala Ala
115 120 125

Gly Leu Leu Gln Val Leu Thr Ala Leu Ser Phe Thr Asn Glu Ala Tyr
130 135 140

His Val Lys Lys Gly Asp Tyr Val Leu Leu Phe Ala Ala Ala Gly Gly
145 150 155 160

Val Gly Leu Ile Leu Asn Gln Leu Leu Lys Met Lys Gly Ala His Thr
165 170 175

Ile Ala Val Ala Ser Thr Asp Glu Lys Leu Lys Ile Ala Lys Glu Tyr
180 185 190

Gly Ala Glu Tyr Leu Ile Asn Ala Ser Lys Glu Asp Ile Leu Arg Gln
195 200 205

Val Leu Lys Phe Thr Asn Gly Lys Gly Val Asp Ala Ser Phe Asp Ser
210 215 220

Val Gly Lys Asp Thr Phe Glu Ile Ser Leu Ala Ala Leu Lys Arg Lys
225 230 235 240

Gly Val Phe Val Ser Phe Gly Asn Ala Ser Gly Leu Ile Pro Pro Phe
245 250 255

Ser Ile Thr Arg Leu Ser Pro Lys Asn Ile Thr Leu Val Arg Pro Gln
260 265 270

Leu Tyr Gly Tyr Ile Ala Asp Pro Glu Glu Trp Lys Tyr Tyr Ser Asp
275 280 285

Glu Phe Phe Gly Leu Val Asn Ser Lys Lys Leu Asn Ile Lys Ile Tyr
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Pro Lys Asp His Gln Val Leu Ile Lys Val His Ala Cys Gly Ile Asn
35 40 45

Pro Val Glu Thr Tyr Ile Arg Ser Gly Thr Tyr Thr Arg Ile Pro Leu
50 55 60

Leu Pro Tyr Thr Pro Gly Thr Asp Val Ala Gly Val Val Glu Ser Ile
65 70 75 80

Gly Asn Asp Val Ser Ala Phe Lys Lys Gly Asp Arg Val Phe Thr Thr
85 90 95

Ser Thr Ile Ser Gly Gly Tyr Ala Glu Tyr Ala Leu Ala Ser Asp His
100 105 110

Thr Val Tyr Arg Leu Pro Glu Lys Leu Asp Phe Arg Gln Gly Ala Ala
115 120 125

Ile Gly Ile Pro Tyr Phe Thr Ala Cys Arg Ala Leu Phe His Ser Ala
130 135 140

Arg Ala Lys Ala Gly Glu Ser Val Leu Val His Gly Ala Ser Gly Gly
145 150 155 160

Val Gly Leu Ala Ala Cys Gln Ile Ala Arg Ala Tyr Gly Leu Lys Val
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35 40 45

Pro Val Glu Thr Tyr Ile Arg Ser Gly Ala Tyr Ser Arg Lys Pro Ala
50 55 60

Leu Pro Tyr Thr Pro Gly Ser Asp Val Ala Gly Ile Ile Glu Ser Val
65 70 75 80

Gly Asp Lys Val Ser Ala Phe Lys Lys Gly Asp Arg Val Phe Cys Tyr
85 90 95

Ser Thr Val Ser Gly Gly Tyr Ala Glu Phe Ala Leu Ala Ala Asp Asp
100 105 110

Thr Ile Tyr Pro Leu Pro Glu Thr Leu Asn Phe Arg Gln Gly Ala Ala
115 120 125

Leu Gly Ile Pro Tyr Phe Thr Ala Cys Arg Ala Leu Phe His Ser Ala
130 135 140

Arg Ala Arg Ala Gly Glu Ser Val Leu Val His Gly Ala Ser Gly Gly
145 150 155 160

Val Gly Leu Ala Thr Cys Gln Ile Ala Arg Ala His Gly Leu Lys Val
165 170 175

Leu Gly Thr Ala Gly Ser Glu Glu Gly Lys Lys Leu Val Leu Gln Asn
180 185 190

Gly Ala His Glu Val Phe Asn His Lys Glu Ala Asn Tyr Ile Asp Lys
195 200 205

Ile Lys Met Ser Val Gly Asp Lys Asp Lys Gly Val Asp Val Ile Ile
210 215 220

Glu Met Leu Ala Asn Glu Asn Leu Ser Asn Asp Leu Lys Leu Leu Ser
225 230 235 240

His Gly Gly Arg Val Val Val Val Gly Cys Arg Gly Pro Ile Glu Ile
245 250 255

Asn Pro Arg Asp Thr Met Ala Lys Glu Thr Ser Ile Ile Gly Val Ser
260 265 270

Leu Ser Ser Ser Thr Lys Glu Glu Phe Gln Gln Phe Ala Gly Leu Leu
275 280 285

Gln Ala Gly Ile Glu Lys Gly Trp Val Lys Pro Val Ile Gly Ser Glu
290 295 300

Tyr Pro Leu Glu Lys Ala Ala Gln Ala His Glu Asp Ile Ile His Gly
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Ser Gly Lys Thr Gly Lys Met Ile Leu Leu Leu
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 <400> 11
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 <223> synthetic oligonucleotide
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<210> 13
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<210> 14
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